

REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claims 8, 14, 21, 28, 30-33 and 35-37 have been amended. Claims 1-7, 10-13, 16-20 and 38-42 have been cancelled without prejudice. Therefore, claims 8-9, 14-15 and 21-37 now are presented for examination.

Restriction Requirement

Applicant elects group I (claims 8-9, 14-16 and 21-37), and cancels claims 38-42 without prejudice.

35 U.S.C. § 102 Rejection

Claims 8-9, 14-16, 21-24, 28-29 and 33-34 as best understood are rejected under 35 U.S.C. §102(e) as being taught by Lempel, U.S. Patent No. 5,978,909 (“Lempel”).

Lempel discloses that “the BTB and SBTB are *looked up to determine if any known branches reside in the line of code being fetched. Previously encountered branches are stored in the BTB and SBTB* based on the address of the last byte of the branch instruction.” (col. 5, lines 16-20; emphasis provided). Lempel further discloses that “*the SBTB tracks branch history* for those branches that are not stored in the BTB after they have been identified by the static predictor, but *before the branch instruction is executed and allocated in the BTB.*” (col. 5, lines 61-65, emphasis provided).

In contrast, claim 8, in pertinent part, recites that “the SBTB and the ABTB are included in a branch target buffer (BTB).” (emphasis provided). Although Lempel discloses a SBTB and a BTB, Lempel fails to disclose or reasonably suggest that “the SBTB and the ABTB are included in a branch target buffer (BTB)” as recited by claim 8.

(emphasis provided). For example, figure 2 from Lempel discloses “dynamic predictor 135 which *includes BTB 145 and SBTB 150.*” (Fig. 2 and col. 6, lines 51-57’ emphasis provided). In contrast, figure 4B of the Specification shows branch predication unit 420 which includes BTB 470. BTB 470 includes SBTB 490 and ABTB 480. (see Fig. 4B, Specification, page 11, lines 4-18). Lempel fails to disclose or reasonably suggest “the SBTB and the ABTB are included in a branch target buffer (BTB)” as recited by claim 8. (emphasis provided). Accordingly, Applicant respectfully requests the withdrawal of the rejection of claim 8 and its dependent claims.

Claims 14, 21 and 28 contain limitations similar to those of claim 8 and accordingly, Applicant respectfully requests the rejection of claims 14, 21 and 28 and their dependant claims be withdrawn.

35 U.S.C. § 103 Rejection

Claims 25-27, 30-32 and 35-37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lempel.

With regard to claims 25-27, 30-32 and 35-37, they depend from one of independent claims 21, 28 and 33 and thus, include the limitations of the independent claim from which they depend. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 25-27, 30-32 and 35-37.

Conclusion

In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

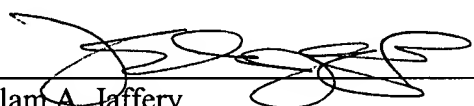
Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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